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Worldwide Report

NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 27



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AUSTRALIAN GROUP PLANS SALE OF URANIUM TO SOUTH KOREA

Canberra THE WEEKEND AUSTRALIAN in English 10-11 Nov 79 p 1

[Report from Ian Perkin]

[Text]

AUSTRALIA has gained its first contract for the sale of uranium since 1972 in the most dramatic fashion possible by signing a \$100 million deal with a South Korean electric utility company.

The contract, for 2500 short tonnes of uranium oxide, was announced jointly yesterday by Ranger uranium partners, Peko Wallsend Ltd, of Sydney, and EZ Industries Ltd, of Melbourne.

The Deputy Prime Minister and Minister for Trade and Resources, Mr Anthony, confirmed the signing of the contract in Canberra, saying several other contracts would be announced soon.

The contract is still subject to approval under the Federal Government's uranium safeguards for exports of Australian uranium, but the announcement is sure to bring a storm of protest from groups throughout the country opposing uranium sales, because of the timing and nature of the deal.

It comes only two weeks after the assassination of South Korea's President Park, and subsequent world

concern about the political stability of that country.

It also comes within a month of the Federal Government's calling for tenders for its share in the Ranger uranium project and the attempt by the Northern Territory Administration to gain control of royalties from major uranium projects like Ranger.

The announcement by Peko and EZ on Friday said representatives of both companies had just signed separate contracts for the supply of a total 2500 short tonnes of uranium concentrates to the Korea Electric Company.

The uranium will come from the Ranger project and will be supplied to the Korea Electric Company over 10 years from 1983, from the shares of output from the mine due to EZ and Peko.

Both EZ and Peko said on Friday that construction of the \$314 million project at Ranger was on schedule and would be completed by 1982, in plenty of time to meet first deliveries to Korea the following year.

In Canberra, Mr Anthony said he expected the EZ-Peko South Korean contract to be the forerunner of sev-

eral other contracts in the near future.

Ironically, Peko and EZ were the last companies to sign contracts for the sale of Australian uranium in 1972, when they agreed to supply two Japanese electric power companies with Ranger uranium.

Because of the slowdown in the development and export of uranium under the Whitlam Labor Government, those contracts with the Chubu and Kyushu power companies have been fulfilled with supplies from stockpiles of Australian Government uranium.

The only other current Australian supplier of uranium is CRA's Mary Kathleen uranium mine in north Queensland, which exports to three markets overseas.

The total value of the latest EZ-Peko-South Korean contract at present-day uranium prices is between \$100 million and \$180 million, giving Peko and EZ a sales share of between \$80 million and \$90 million each.

Further contracts are likely to follow, with initial production from Ranger uranium expected to be 3000 tonnes a year.

GOVERNMENT, OPPOSITION EXPLAIN PARTY LINES ON URANIUM

Deputy Prime Minister's Article

Melbourne THE AGE in English 13 Nov 79, Supp., p 14

[Article by Deputy Prime Minister and Minister for Trade and Resources
Doug Anthony]

[Text]

AFTER THE 1980s the real question is whether there will be enough productive capacity in the uranium industry to fuel the nuclear power stations then expected to be in operation.

This is the situation to which Australia must address itself.

It is to meet this growing demand for uranium to produce electricity that the Government decided, just over two years ago, to adopt a policy of carefully controlled development and export of Australia's uranium resources.

To me there is no question that this decision was correct.

The world's electricity needs are such, and the interests of nuclear non-proliferation are so important, that Australia, as a potential major supplier of uranium, could not stand aside from the world nuclear industry.

Uranium, of course, is only one of the three, perhaps four, major energy resources in Australia's hands.

Our possession of large reserves of coal, natural gas and oil shale — as well as uranium — and our strategic location in relation to the rapidly developing countries of the western rim of the Pacific, give us great responsibilities and great opportunities.

I think it is true to say that before many years have passed

Australia will be the source of a significant part of Japan's electricity — in the sense that it will be generated in power stations fuelled by Australian uranium, coal and natural gas.

This is only one example of the opportunities, and the obligations, that confront Australia.

There are those, of course, who say we should not develop and sell our uranium — later perhaps, but not yet. This approach ignores the reality of the world we live in.

The world is massively and irrevocably committed to nuclear power for electricity generation. More than 800 nuclear power stations are either in operation, under construction or planned.

As oil becomes scarcer and dearer, many countries have no real alternative but to turn to uranium for their electricity.

Certainly we hope that alternatives eventually will become feasible, but there does appear to be no alternative to substantial dependence on nuclear power for some time to come.

I have been advised by the Uranium Export Office that world demand for uranium is estimated to increase from 37,000 tonnes this year to about 100,000 tonnes a year by 1990.

As the bulk of Australian production is not planned to come on stream until the mid 1980s, I ex-

pect Australian producers will be well placed to take advantage of the new market prospects.

Australia is poised to reap the benefits of a significant boost to export earnings, employment and development opportunities from uranium.

There have been suggestions that the Government's consideration of proposals for the acquisition of its share of the Ranger project indicates some concern by the Government about the future market for uranium.

This is not true, and I would have thought that the strong interest in the project around the world was evidence enough of the strong future demand for uranium.

A great deal has been achieved in the past two years to pave the way for the sound and safe development of Australia's uranium resources.

The first production of yellowcake* is due at Nabarlek before the middle of next year and at Ranger in the second half of 1981.

The implementation of our uranium policy has entailed the passage by Parliament of new and complex legislation to give effect to the Government's policies on uranium development covering Aboriginal land rights, national parks, protection of the environ-

ment and codes of practice to regulate nuclear activities in Australia.

We have concluded bilateral safeguards agreements with Finland, the Philippines, the Republic of Korea, USA and the UK. Negotiations with Japan, Sweden and Canada are continuing as a matter of urgency.

In September, 1979, the Council of the European Communities agreed to a mandate for the European Commission, on behalf of Euratom, to negotiate with Australia.

This had been a key objective of Australia and opens the way for safeguards negotiations to begin with the community as a whole. These negotiations are now getting under way.

Consistent with Australia's nuclear safeguards policy good progress has been made in developing a sound base of eligible customers for Australian uranium.

The Ranger, Nabarlek and Yeelirrie projects have been given developmental approval and these projects are well advanced in their marketing arrangements.

Mary Kathleen Uranium Ltd. — Australia's only uranium producer — is operating at planned production levels and on a profitable basis, having re-started production in 1976 and exports in 1977.

The development phase of the Ranger and Nabarlek deposits is already well under way and the Yeelirrie joint venture has begun construction of its research plant at Kalgoorlie.

The Government is studying the feasibility of establishing a commercial uranium enrichment industry in Australia.

Consultations have been held with overseas countries and organisations concerning their interest in co-operating in uranium enrichment in Australia.

The Government also has had discussions with the States and

private industry, as the Government would wish to involve them as fully as possible in the proposed studies.

The sophisticated technology for such a plant could require an eventual investment in the order of \$1000 million.

Assisted by the richness of Australia's uranium resources, the enterprise of many Australians, and the Government's determination to provide a sound and comprehensive policy base founded on what was perhaps the most thorough and painstaking inquiry of its kind ever held (the Ranger uranium environmental inquiry), Australia is about to begin to realise its potential as a major world producer and supplier of uranium.

The benefits to the Australian people and to the world from Australian uranium development will be considerable in the years ahead.

Opposition Spokesman's Comments

Melbourne THE AGE in English 13 Nov 79, Supp., p 14

[Article by Paul Keating, Australian Labor Party spokesman on minerals and energy]

[Text]

SINCE 1977 the Australian Labor Party has had a clearly defined policy on the mining and export of Australian uranium.

This policy has often been articulated. Briefly it states that a future Labor Government will not permit uranium mining or export (except for the purpose of fulfilling contracts entered into before 1972) until the problems associated with the nuclear industry have been resolved to the satisfaction of the party.

Since this policy was adopted, little has happened in the international nuclear industry to justify a change of policy.

No obvious progress has been made in the area of waste disposal, the accident at the Three Mile Island nuclear power plant has raised further concern about nuclear safety and, despite the

signing of bilateral safeguard agreements, there can be little optimism on the weapons proliferation front.

The international nuclear power industry is facing a grim economic and political future.

A recent report on the viability of the civil nuclear industry argued that unless substantial political and economic changes occur in the next five years, four of the world's major nuclear reactor manufacturers will be forced to withdraw from the industry and a further two would follow by the late 1980s.

These companies are the major suppliers of nuclear reactors to the world. The report went on to point out that in the worst-case scenario the collapse of these companies would threaten the viability of nuclear power world wide in the 1990s.

In recent years, the decline of

the nuclear industry has been evidenced by the downwards revision of estimates of future nuclear capacity. The International Energy Agency has cut its estimates of expected nuclear capacity in 1985 from 610 gigawatts (GWe) in 1975 to 220GWe in 1978.

The nuclear industry in the United States, already in a state of depression, has suffered further as a result of the Three Mile Island accident. President Carter's commission on the accident has voted to recommend a halt in the construction of new nuclear reactors until its recommendations for improved safety have been adopted.

Even without this, the Three Mile Island accident will itself have a debilitating effect upon the industry because nuclear generating costs are expected to rise as safety requirements are strengthened. The likelihood is that new reactor orders will be shelved

until a decision is made as to who should carry the financial burden of the accident — the company or the consumers.

Japan is also downgrading the role of nuclear power. The Japanese Ministry of International Trade and Industry cut its 1990 growth target from 100GWe in 1977 to 60GWe in 1978. This year it cut growth projections from 60GWe to 53GWe for 1990 and from 33GWe to 30GWe for 1985.

Germany's long standing nuclear stalemate is no closer to resolution. Sweden intends to make nuclear power the subject of a referendum in 1980 and Switzerland has passed a referendum requiring a national inquiry to determine whether future electricity requirements could be provided by non-nuclear means.

This downturn in world demand for nuclear power has damaged the prospects for the sale of Australian uranium.

No commercial contract for Australian uranium has been signed since 1972. One potential customer, the Philippines, had arrived at an agreement with Australia to supply the fuel for its Bataan plant, but work on the plant has lately been suspended.

Japan, Australia's biggest potential customer, has already secured a supply of uranium sufficient to satisfy its existing and planned nuclear requirements to 1990. This supply period will be extended if Japan's planned rate of nuclear installation contracts further.

By the mid 1980s Australian uranium capacity could be in the order of 8000 tonnes from Ranger, Nabarlek and Yeelirrie with a further 4000 tonnes from Roxby Downs. Finding markets for this uranium will be exceedingly difficult.

The Australian Atomic Energy Commission predicted in 1974 that world demand for uranium in 1985 would be about 115,000 tonnes. In its 1977-78 annual re-

port this estimate has been decreased to 54,000 tonnes. On the basis of expected world uranium production capacity this will mean a surplus of more than 30,000 tonnes a year by the mid 1980s.

One of the major arguments advanced for the sale of Australian uranium is that this will contribute significantly to solving the energy crisis. This is very glib. The present contribution by nuclear power is small. At the moment it represents only 3 per cent of world energy requirements and 12 per cent of total power demand. Yet the economic, environmental and political burden placed on society by this technology is immense. Nuclear power is dangerous, and while coal and oil also pose problems, nuclear power is unique in that it threatens future as well as current populations.

One catastrophic breach in a closely settled area will finish the industry completely. The future of nuclear power is contingent upon an unblemished record of safety.

The nuclear debate has been conducted against the background of total energy sufficiency. Emphasis has always been placed on supply, with conservation receiving only lip service. It is now believed that the industrialised world is using 30 to 40 per cent more energy than is necessary to maintain the same levels of output. Living standards could be maintained with the correct emphasis on energy efficiency and conservation without resort to nuclear power.

The Labor Party's uranium policy begs a continuing assessment of the state of the nuclear industry, particularly with respect to waste disposal and nuclear proliferation. Hence the course of nuclear power will impact upon the future direction of Labor policy.

The same emphasis must be directed towards obviating the need to rely upon the dangerous technology of nuclear power and to deal with the unresolved problems which attend the existing nuclear structure.

AUSTRALIA

DEVELOPMENT, PROBLEMS OF URANIUM MINING DISCUSSED

Location of Mines Noted

Melbourne THE AGE in English 13 Nov 79, Supp., p 6

[Article by Anthony Clarke]

[Text]

THE BULLDOZERS have stopped at Nabarlek after one of the most extraordinary operations in mining history. In a 12-week blitz-krieg on a unique concentrated deposit of uranium ore the size of a football field, \$840 million worth of ore has been dug up.

About a million tonnes of earth and rock and ore has been dug up and stockpiled for processing into yellowcake & uranium oxide, the raw material from which atomic reactor fuel is made, and hydrogen bombs armed.

Queensland Mines, the owners of the controversial Nabarlek deposit, say that they have mined enough ore in these past three months to fill their export orders for the next nine years. It is destined (if and when final agreements are signed) for Japan.

The yellowcake will be flown to Japan, 12,000 tonnes of it, in a series of special airlifts beginning next year. It will be the fuel for two new \$400 million power stations.

Nabarlek is only the tip of Australia's nuclear iceberg — it is by far the smallest of the uranium ore discoveries in the 50,000 square kilometres of bushland, jungle and swamp that make up the Alligator River Province south and east of Darwin.

The figures for the known deposits are so large as to be almost incomprehensible. Australia has around 260,000 tonnes of economically recoverable uranium, worth on present prices

about \$21,000,000,000 — almost as much as the entire Australian Budget last year.

Perhaps more significantly, the deposits at Nabarlek and the other pinpoints on the Northern Territory map, represent something like 18 per cent of the Western world's exploitable uranium. By 1985, on present predictions, Australia would be the world's major nuclear power-broker, providing a fifth of the atomic fuel for all the power-stations in the West.

It is because of its unique importance as a uranium mine that Australia has become a focus for intense international lobbying between the pro-and anti-nuclear movements.

Here, the debate has largely centred on environmental objections and the disruption of Aboriginal lands. In Europe and America, Australia is regarded as the one non-committed country which could significantly slow down the move towards a plutonium economy.

In the Alligator River Province it is now taken for granted that the Government and the miners have won round one. In defiance of the ACTU ban, hundreds, soon thousands, of workers are pouring into construction camps and within a year the first shipments of the "new" uranium discoveries will be shipped out.

The National Energy Advisory Committee says that by 1985 Australia will be exporting between 10,000 and 20,000 tonnes of uranium ore, worth \$70 to \$140 million on present prices.

The Ranger deposits (see map), which hold at least 40 million tonnes of uranium ore, will go into production late in 1981 — initially exporting 3000 tonnes of yellowcake to America, Europe or Japan.

Pancontinental Mining Ltd.'s ore reserves at Jabiruka are even bigger — at least 53 million tonnes — and development is still strongly opposed on environmental grounds by the Northern Lands Council.

Pancontinental has now announced that it will go underground instead of using an open-cut operation to meet environmental objections, and it hopes to start mining 3000 tonnes of yellowcake a year within the next three or four years — that's more than \$200 million worth.

The Pancontinental operation will produce far more waste than the other NT ventures. While Nabarlek will produce only 1 million tonnes of waste and Ranger 60 million tonnes, Pancontinental is expected to produce some 520 million tonnes of waste.

But the grand-daddy of them all could be the Western Mining Corporation's discovery at Olympic Dam in South Australia — a gigantic lode of copper and uranium.

WMC has made no estimates yet of the size of the deposits, but the Deputy Prime Minister, Mr. Anthony, is on record as saying that he has been told Olympic Dam could hold more uranium than Ranger, Jabiruka and Nabarlek put together.

Outside the Northern Territory WMC also owns the main uranium project likely to get underway soon — the Yee-lirrie project in Western Australia.

Last year WMC entered into an agreement with Exxon, the world's biggest oil company, and Urangesellschaft of West Germany. The two foreign partners together hold a 25 per cent equity in the project, will take some 60 per cent of the yellowcake output (47,000 tonnes total), and provide much of the finance needed for the project.

Altogether Australia's present annual production capability of around 530 tonnes is expected to grow to around 20,000 tonnes in just 10 years.

We will then have the third largest production capability in the Western world, behind the US (58,250 tonnes) and that part of Africa south of the Sahara (23,200 tonnes).

The success of nuclear power programmes in a number of countries is dependent on Australian uranium. So

far government-to-government agreements have been signed with five countries: South Korea, Finland, the Philippines, USA and the United Kingdom.

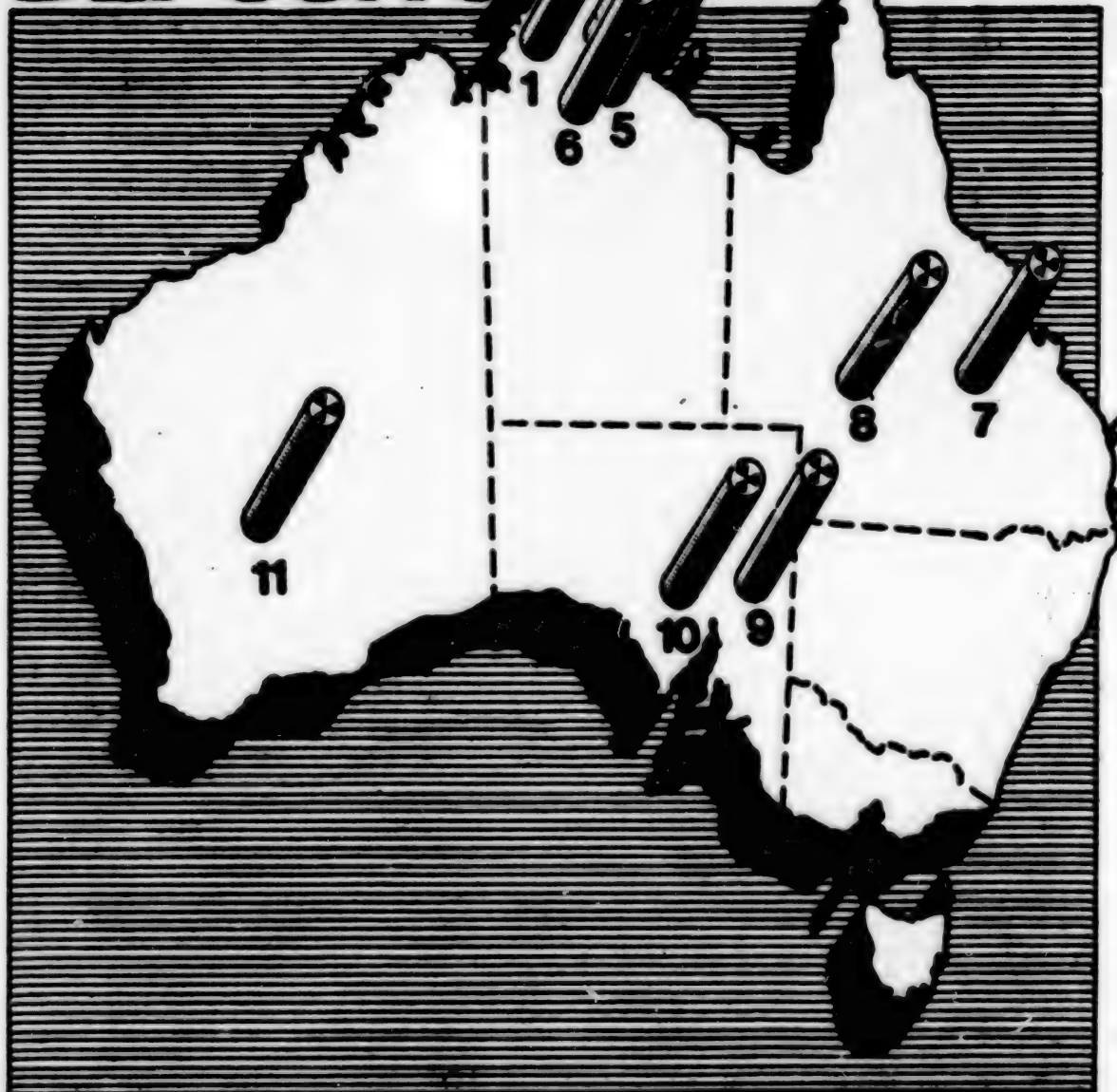
Negotiations are going on with four other countries which are committed in varying degrees to nuclear power: Japan (which plans to build dozens of new nuclear plants to reduce its dependence on oil imports), Canada, France, and Sweden.

The Federal Government is insisting on safeguard agreements designed to ensure that Australian uranium does not finish up in bombs. Some anti-nuclear groups say that the safeguards are too vague and weak.

There is a further big problem. In the wake of what the public sees as a near nuclear disaster at Three Mile Island there has been a dramatic downturn in nuclear power station plans in America and in Europe.

If this trend continues, it will throw all projections for uranium demand out of the window; Australia could finish up with a stockpile of unwanted, uneconomic ore.

URANIUM DEPOSITS



1 Rum Jungle
2 Jabiru
3 Nabalco
4 Ranger

5 Kungarra
6 S. Alligator Valley Deposits
7 Ben Lomond
8 Mary Kathleen

9 Beverly
10 Olympic Dam
11 Yallirrie

Visit to Ranger Project

Melbourne THE AGE in English 13 Nov 79, Supp., p 6

[Article by Anthony Clarke]

[Text]

"URANIUM mining should be treated just like any other mining operation," the Ranger project manager, Alan McIntosh, stressed as I toured the 40-hectare mine site. "The problems are basically the same."

The Ranger mine, 240 kilometres from Darwin at Jabiru, on the Arnhem Highway, was intended to have been in production in 1971.

The well-publicised environmental and political problems slowed development: it is now scheduled to begin production of yellowcake in late 1981.

Alan McIntosh has worked right through all the holdups and setbacks. The years of obstacles and delays have made him cynical.

He has lived all that time in the temporary Ranger town on the 800-hectare lease area, alongside the mine. His house is surrounded by trees, shrubs and grass, a tropical patch in the otherwise stunted scrub landscape.

The mine is an impressive engineering achievement which, Ranger says more than adequately meets the immediate environmental requirements.

To get one tonne of ore, four tonnes of waste rock must be removed from the mine. And it takes 300 tonnes of ore to produce one tonne of the exportable yellowcake. That leaves a staggering amount of waste to be collected and safely stored.

The critical storehouse for the huge amount of waste is a huge tailings dam alongside the mine, an imposing barrier enclosing one square kilometre of storage area.

Soil has been excavated down

RANGER

Ready to roll

the bedrock in a huge trench about 15 metres wide and up to three metres deep.

One mining engineer on site, looking at this multi-million dollar dam and other safety measures, described the work as an environmental overkill.

Mr. Jón Leites, Leader of the Opposition in the Northern Territory Legislative Assembly, has toured the Ranger mine site and the nearby Queensland Mines operation at Nabarlek.

He is opposed to uranium mining, on the grounds of inadequate supervision of the final use of fissionable material and unproven methods of treatment of waste from reactors.

But he agrees that as far as the effect on the immediate environment is concerned, the mines he has visited have answers to all objections.

The Ranger number one deposit will, at the planned output of 5000 tonnes of yellowcake a year, support mining for at least 15 years.

A second deposit, Ranger number three, is at least as big, probably larger than the number one deposit.

Ranger is looking at mining for uranium well into the 21st century, should demand still exist.

Underlining ACTU president Bob Hawke's stand over the futility of the ACTU "ban" on ura-

num mining, construction of the Ranger project is now at full pace. About 800 temporary workers are housed in row on row of drab, temporary barracks.

There are two 10-hour shifts a day. The work is arduous but the money is good. Labor is all European — no Aborigines have been recruited.

When mining begins this time next year the temporary construction workers will have packed up and gone and permanent Ranger personnel will be housed at the nearby Jabiru township, which is being developed to serve the Alligator Rivers uranium province.

For the Ranger mine, the last question is ownership. Now that the last environmental obstacles have been surmounted and support seems certain, the Federal Government has made it clear it favors selling its half share.

In October 1974 the Ranger partners, Peko Waddell and EE Industries did a deal with the Whitlam Government under which the Commonwealth gained an effective half share in Ranger through the Australian Atomic Energy Commission, in exchange for contributing 72.5 per cent of the project's capital costs.

The Government has called for tenders for its share. Present runners appear to be its present partners Peko Waddell and EE Industries, who plan to form a new company to take over the Government stake.

But there will be keen competition for this equity. The last Ranger question is whether this energy resource, now held in trust for the Australian people by the AEC, stays in Australian hands.

Melbourne THE AGE in English 13 Nov 79, Supp., p 6

[Article by Anthony Clarke]

[Text]

THE ROAD to the Oenpelli Aboriginal reserve 100 kilometres from the Ranger mine, rough and dust blown, and littered with beer cans on either side.

The township presents a superficially European appearance of prefabricated houses, municipal buildings and a school.

Some of the houses are neat, set well treed sites. They mainly belong to the scattering of whites who live and work on the reserve.

Most other houses are, to our eyes, poor. The buildings are unkempt, with broken windows, torn shades. Empty food and drink cans litter the ground around the dwellings. Our culture's values don't apply here.

Drink is a huge problem. Many Aborigines here drink purely to get drunk and gain a temporary release from the new pressures on their society, caused partly by uranium mining.

But is this so different, some Territorians ask, from the wild scenes on a Saturday night at the Alligator River Motor Inn when the white mining camp construction workers let rip?

The Oenpelli population fluctuates between 200 and a maximum 600, depending on how many Aborigines are out at the outstations being developed in the vast Arnhem area. Some use Oenpelli as their main dwelling area. Others use it as a resource centre, for medical aid and so forth.

The main worry Aborigines have about mining is the uncontrolled intrusion into their tribal areas, a field officer for the Northern Lands Council told me.

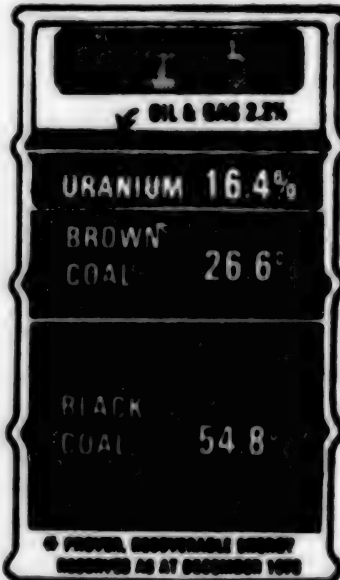
"You have to remember that some of these people can remember back before the second world war," he said. "They can remember when some police officers used to lead shooting parties into Arnhem Land, to hunt buffalo and Aborigines."

He claimed that when the traditional owners of the Queensland Mines' Nabarlek mine site signed the mining agreement last year,

CSO: 5100

OENPELLI

Fear and loathing



they knew the Nabarlek access road would pass over Oenpelli land.

"But they did not know it would pass just one kilometre from the Oenpelli township, with huge trucks roaring past.

"The Aboriginal people revoked the permit allowing Queensland Mines to use this road. Yet the trucks still rear through. The Aborigines are powerless to stop them.

"They fear this shows they will have no control over any development in the region, and they are especially fearful of the effects on the people and the land if the nearby Pancontinental mining project goes ahead."

The Oenpelli Aboriginal way of life is doomed, many sympathetic Territorians believe, unless the uranium mining developments in the Ranger region are carefully controlled to lessen this clash of culture. There's a deep vein of hostility among Territory whites towards the Aboriginal population.

It now seems certain that uranium mining and export from this area will proceed. Queensland Mines has now finished mining its rich Nabarlek deposit, which it enters from the Oenpelli Road. The Jabiru Town Authority will have further advanced in building the Jabiru township, 30 kilometres up the track, which will service all the mines.

Mr. Jon Isaacs, Leader of the Opposition in the NT Legislative Assembly, told me that the Territory has no power to stop uranium mining. What it must do is make sure that Aborigines get far more sympathetic treatment.

As a safeguard, he said, the size of the Jabiru mining township must be limited.

Australian Government Ministers have pledged that the Jabiru township will be limited to a maximum 3500 people. But there is already talk in the Territory of numbers going above this — even of Jabiru being developed eventually as a regional tourist centre.

LABOR PARTY URGED TO RETHINK POLICY ON URANIUM

Canberra THE AUSTRALIAN in English 13 Nov 79 p 6

[Editorial: "Labor Must Think Again on Uranium"]

[Text]

THE Australian Labor Party must look again at its policy on uranium mining and export. It surely must see, in the turmoil arising from events in Iran, that its policy is out of touch with reality. Even if the imbroglio is sorted out, with Iranian oil exports returning to normal, it is obvious that nations will be seized with the need to develop alternative energy sources. For many, that will mean development or extension of nuclear power generation.

After seven years in virtual limbo, Australia is back in the uranium business. Last Friday's announcement by the Ranger partners of a sale of 2500 tonnes of uranium concentrate to South Korea will, as the Deputy Prime Minister, Mr Anthony, predicted, be the first of many. Australia is already negotiating further sales with a number of countries in Europe and with the United States and Japan.

For many, the reality of this situation will be painful. They want to leave Australia's uranium in the ground. But the realities of the world energy situation, compounded by the crisis in the Middle East, are too stark to be ignored. The luxury of a principle – a dubious one, at that – is something we cannot afford in a world starving from lack of fuel. It is not being sensational or simplistic to say that the prospect of a nuclear holocaust brought about by the world's great powers going to war

over oil is far grimmer – and far more likely – than the possibility of an accident in a nuclear power plant.

The key to nuclear power is safety. It is correct to say the world is aware of the dangers and Australian policy is clear: exports will be made only to nations which accept and implement appropriate safeguards.

It is not, of course, a matter for Australia alone to decide. While we do not need nuclear energy ourselves at this time, resource-starved countries have no alternative: they must have nuclear fuel.

If they do not get it from Australia they will find it somewhere else. Yet sales of uranium will provide Australia with much needed foreign income. The needs of research into other forms of energy, pointed out in the editorial below, could come from the income from uranium exports.

First shipments to South Korea will not be made until 1983. Between now and then we will see at least one election. With its present policy, a Labor Government will have to renege on the Korean and other new contracts.

Labor's attitude, no matter how sincerely based, is unreal. Neither miners nor purchasers can be expected to live with such uncertainty. We need a united, sensible, practical and bipartisan approach to this issue. It is important for the world as well as Australia.

LEADING NUCLEAR SCIENTIST DEFENDS URANIUM INDUSTRY

Canberra THE WEEKEND AUSTRALIAN in English 17-18 Nov 79, Supp., p 2

[Feature, "Opinion", by Richard Schneider: "A Fatherly Defense of Uranium"]

[Text] "I 'M not pro-uranium - I'm pro-facts." So says Ernest Titterton, Knight, Professor, and the man who pulled the trigger on the first atomic bomb.

We are sitting in Titterton's office at the Australian National University - a large room crowded with files, notes, books - sipping tea from a white china teaset. Dressed in a short-sleeved checked shirt, shorts, black shoes and short socks. Titterton looks far from being one of the world's leading nuclear physicists.

Despite the casual facade he talks and sounds like a university professor, a man accustomed to expressing himself in short, pithy phrases, but behind it all there is the air of the propagandist. Titterton does not just express himself on a subject, he clearly believes in it. And uranium is a subject dear to his heart.

On Monday, National Development Minister Kevin Newman is going to launch a book co-authored by Titterton. Entitled *Uranium - Energy Source of the Future* it is the first in a series of "discussion" publications commissioned by the Australian Institute of International Affairs.

The series is aimed at examining the pros and cons of controversial and international issues. The uranium book uses Titterton to give the case for. The radiation protection officer at the University of Melbourne, F.P. Robotham (who was overseas last week and could not be interviewed)

gives the case against. Titterton describes it as a "gladiatorial contest."

Publication of the book coincides with Australia's own entry into the nuclear era. A week ago Australia sold 2500 tonnes of uranium to South Korea. Deputy Prime Minister Doug Anthony believes this will be only the first of many such sales in the next few months.

But at the same time the Labor Party and the trade union movement is divided on the issue - Labor's hardheads anxious to use uranium sales to fund the economic situation of a future Labor Government, its committed "lefties" bitterly opposed to any continuation of mining or sale. Thus uranium will be an increasingly hot subject, and the views of Titterton and Robotham will be seized upon by the opposing camps.

Seeing Titterton in his own office it is hard to believe this extremely casually dressed, relaxed, 63-year-old was one of the developers of British radar in World War II, the man who literally pulled the trigger detonating the first atomic bomb a few weeks before Hiroshima and Nagasaki, and later come to Australia to launch the chair of nuclear physics at the Australian National University. One of the leading nuclear research scientists in Australia, Titterton has never shied from controversy, never shrunk from his belief in uranium as an energy source. If anything, the years have confirmed him in that view.

Ernest William Titterton was born in Tamworth, England, on March 4, 1916, educated at the grammar school of Elizabeth, Queen of England in Tamworth. His interest in physics was

sparked off by his science teacher and at the age of 13 the young Titterton declared his intention to become a scientist when he grew up.

With single-minded dedication he worked toward that aim. In 1939 he became a research officer with the British Admiralty, and for the next few years worked with a group of English scientists developing the UK's radar system, a task whose priority had to take precedence over the embryonic research into nuclear fission.

But the scientists believed an atomic explosive device was a distinct possibility, and once the basic work on radar had been done it was transferred to the engineers. Titterton and others began working on "the bomb," decided it was feasible, and by the time they had done that Churchill and Roosevelt had agreed to transfer the entire nuclear weapon project to the U.S. for security reasons. Titterton travelled to America, spending the next four years at Los Alamos, New Mexico. As the senior member of the trial of the first bomb, it was Titterton who handled the count-down for the detonation.

Titterton returned to the UK, directed the Atomic Research Group at Harwell, and in 1950 came to Canberra to take the chair of nuclear physics at the ANU, a post he has held ever since.

A man of forthright views and firm opinions, Titterton respects others of like mind. His particular favorite Australian politician was Sir Robert Menzies, the man who brought him here. But he also admires West Australia's Sir Charles Court and Queensland's Joh Bjelke-Petersen.

On one occasion Menzies visited the university to inspect a British government gift of an electron synchrotron which developed an intense, narrow x-ray beam. Titterton advised the Prime Minister the beam was quite safe unless you were in it — in which case a lethal burst of radiation would be received within a few minutes. "You mean," Menzies asked, "that that can kill people?" Titterton replied it could. "Well," said Menzies, "tomorrow I'll send you a list of names."

Titterton believes both Court and Bjelke-Petersen are major figures whose shoes will be hard to fill when they leave the political scene. "They are two absolutely vital leaders," he says.

Titterton has no qualms about his own forthright views on uranium, but insists his views are based on facts, not emotion . . . unlike those who oppose development of the fuel source. "If you look at the facts of the world energy situation — and energy is vital to our standard of living," he says, "you must come to the conclusion that there is no energy source which can provide what the customers want over the next few decades other than nuclear fuel."

"It is not a matter of being pro-uranium — it is a matter of being pro our standard of living. The alternative is to be without energy, with declining standards of living, no power to work the factories, rising unemployment. There would be a scramble for oil, widespread international bickering — in other words, all the ingredients of war."

"But all of this is totally unnecessary, because in uranium we have an energy source that has been proved. There are today 204 power stations generating electricity from uranium — providing power not just to boil the morning cup of tea but to work the housewives' washing machines, hair dryers, vacuum cleaners, to power the lift that takes you into your office, drives the machinery in the factories."

"The amazing thing is how much we take these things for granted. Even the food we eat requires energy of some sort — for harvesting, processing, transport, storage. My view is quite simple: energy is the central feature of our current standard of living."

"We don't have to suffer the loss of our standard of living or risk the danger of international war from people fighting for the remaining fossil fuels."

Titterton also has no qualms about the safety of the product. "People working in the uranium industry are safer than those working in the coal industry," he says, claiming that the Three Mile Island mishap was "greatly overplayed" by the media and the opponents of nuclear energy. He points out that coal mining is underground, carries the risk of explosions, rock falls, industrial accidents, inhalation of coal dust.

"There are 10 times as many deaths and injuries in the coal fired power industry than in the nuclear power industry," he asserts.

"Despite Australia's vast coal deposits he still sees a future for nuclear power in Australia itself. Australia should sell its coal for high foreign exchange earnings, allowing more oil purchases from overseas. It should also sell uranium but not ignore its domestic potential.

"Cheap power provided by uranium can assist the development of major processing operations — such as for alumina — allowing us to compete properly in world markets for processed mineral products."

Titterton is disappointed with the delays in getting Australia's uranium industry on-stream, delays which cost Australia great sums in revenue, now, however, he is relieved that the Government is pressing on "with vigor."

Titterton is unconcerned about his role in the development of the A-Bomb or its use in Japan at the end of World War II. "It enabled the war against Japan to be finished much more quickly than would have otherwise been the case," he said. "Without that weapon there would have been a ground invasion of Japan, with many more people being killed or injured — perhaps one to two million casualties."

While naturally committed to nuclear research — Titterton would like to see more work done on fusion, and is overseeing projects on that difficult matter now — he accepts the importance of widespread research into all forms of energy development.

AEC SCIENTIST: MINIMAL RADIATION FROM KALGOORLIE PLANT

Perth THE WEST AUSTRALIAN in English 13 Nov 79 p 42

[Text]

KALGOORLIE: Radiation from the proposed metallurgical research plant north of Kalgoorlie would be almost immeasurable, according to an Australian Atomic Energy Commission scientist.

Mr James Cook told a public seminar that there would be no health hazard to the local community.

He said that the radiation dose from the pilot plant would be the same as that for a person travelling in an airliner.

People living near the pilot plant would be subject to 0.1 millirem of radiation — eight times less than what would be received while watching television.

Mr Cook, who is the acting director of the AEC's environmental and public health unit, was speaking at the WA School of Mines.

The chief scientist with the commission's power and energy division, Dr John Symonds, and the chief scientist with the nu-

clear fuel-cycle division, Dr Clarence Hardy, also addressed the seminar.

Mr Cook said that the main source of exposure to radiation for the average person was medical diagnosis.

Compared with other power industries, nuclear power was very safe.

Dr Symonds said that though the accident at Three Mile Island, Pennsylvania, this year was the worst in the industry's history, no one had been killed.

Figures released by the scientists showed that Australia had the third most uranium in the world, with the Yeelirrie deposit the third biggest in Australia.

Dr Hardy said that the Yeelirrie project would cost \$300 million to develop and would employ 850 workers during its operation.

The associated pilot plant at Kalgoorlie would cost \$21 million and would employ 60 workers.

AUSTRALIA

TITANIUM PRODUCER PLANS TO HIRE RADIATION SPECIALIST

Perth THE WEST AUSTRALIAN in English 13 Nov 79 p 27

[Text]

The titanium producer Laporte Australia Ltd will bring a radiation specialist to its Australind refinery site to report on low-level radiation waste disposal.

The operations director of Laporte, Mr R. Noble, said yesterday that the decision to bring in a specialist was taken because of possible public anxiety over news-media reports that there might be some long-term hazard in the disposal site now being used.

He said Laporte was satisfied that there was no hazard.

"Waste is being disposed of and covered according to safety procedures laid down by the Public Health Department," he said.

Mr Noble said that these procedures had been followed and monitored by the Government for about three years without showing any hazard at the disposal site.

The company has also decided that because of the increasing population in the Australind area, it would complete the fencing of the refinery site.

Mr Noble said that talks began last week with officials of the Australian Atomic Energy

Commission and should lead soon to the appointment of the radiation specialist.

AUSTRALIA

FIVE UNIONS ASK WORKERS NOT TO WORK WITH URANIUM

Sydney THE SYDNEY MORNING HERALD in English 15 Nov 79 p 12

[Report from Andrew Casey]

[Text]

Five unions with members in the uranium industry have issued a joint newsletter calling on their members to refuse to work with uranium.

The newsletter, which is being circulated to about 300,000 union members throughout Australia, says:

"To put a shovel (manual or mechanical) into uranium is to participate in the devastating nuclear fuel cycle. Don't accept such awesome responsibility.

"No uranium. No nuclear disasters."

The five unions are the Amalgamated Metal Workers and Shipwrights' Union, the Electrical Trades Union, the Australian Railways Union, the Building Workers' Industrial Union and the Transport Workers' Union.

The federal secretary of the BWIU, Mr Pat Clancy, denied yesterday that the timing of the newsletter's release had any-

thing to do with a special union conference on uranium called by the ACTU for November 30.

"The leaflet was planned and ready for printing before the September ACTU congress but we held it over to ensure that the facts contained in the document were completely up to date," Mr Clancy said.

"Though it is coincidental that it has been released just before the special conference, I hope it will help to influence that meeting."

At the September ACTU congress, the president of the ACTU, Mr Hawke, was soundly defeated when he urged delegates to accept the reality of uranium mining.

Mr Hawke said a number of unions were competing for coverage of uranium workers in the Northern Territory.

He also accused some unions — including most of the signatories to the newsletter — of hypocrisy for having anti-uranium policies and members who work in the industry.

NEW SAFETY PROCEDURES PLANNED FOR URANIUM MINES

Melbourne THE AGE in English 13 Nov 79 p 3

[Report from Chief Industrial Reporter Michael Gordon]

[Text]

New health and safety procedures seem certain to be introduced at the Ranger and Nabarlek uranium mines in the Northern Territory.

This follows criticism of some practices in a report commissioned by the Miscellaneous Workers' Union, which covers many workers in the Northern Territory uranium industry.

The report said it was unlikely that Nabarlek workers had received excessive radiation doses, but claimed several procedures were inadequate.

It warned that dust levels could be a problem at Ranger and said the hazards of radiation were not well known by the people of Jabiru.

The general manager of Ranger, Mr Don Woods, said yesterday he did not see any problems with the report and said recommendations would be implemented.

The 51-page report was prepared by Mr. Noel W. Arnold, an occupational hygienist with the Western Region Health Centre. It will be discussed at a meeting of all unions in the uranium industry later this month.

The federal secretary of the Miscellaneous Workers' Union, Mr. Ray Gleiselt, said the report justified the union's action to protect the health and safety of its members and that of other workers on the sites.

Mr. Gleiselt said he had not received a response to the report from the companies.

"I'm sure that we will be able to have them implement the recommendations," he said.

The report was particularly critical of induction courses for workers at Nabarlek. It said the radiation safety officer was not well known among plant operatives and that the presentation of radiation exposure results to workers could have been improved.

Although employees at Nabarlek were discouraged from smoking in the radiation area, non-compliance was common and there was little supervision of personal hygiene practices.

Facilities for cross-laboratory checking of results at Nabarlek was inadequate and poorly organised and facilities and supervision of the vehicle washdown area were inadequate.

The report suggested that the union should have access to all documents, submissions and plans that had a bearing on the health and safety of its members.

The main recommendations apply mainly to Ranger and future mining at other sites.

They include:

- Major improvements to induction courses, including publishing radiation booklets and leaflets in foreign languages.

- Provision for all radiation workers to receive regular notices setting out their accumulated radiation dose and the proportion of the permissible maximum.

- Provision of sufficient staff to ensure strict supervision of washing before eating and drinking as well as showering and changing clothes before leaving the radiation area.

AUSTRALIA

ABORIGINAL LAND RIGHTS ACT THREATENS JABILUKA DEVELOPMENT

Melbourne THE AGE in English 14 Nov 79 p 1

[Report from David Broadbent]

[Text]

CANBERRA. — The Federal Government will have to amend the Aboriginal Land Rights Act to guarantee development of the Pancontinental Jabiluka uranium project.

The act gives Aborigines power to veto the project because part of the land needed by the company is subject to a claim by the Northern Land Council.

It gives the council power to block mining because Pancontinental applied for the land after the act was introduced, in 1976.

The land includes the world's largest uranium deposit.

In the Ranger uranium negotiations, Aborigines could negotiate only terms and conditions of mining without the power of veto because the Ranger consortium applied for the land before 1976.

The Pancontinental group realised they needed more land to fully prove their ore only after 1976. Previously it was thought the company would face long negotiations only on terms and conditions.

The Jabiluka claim, which is widely expected to succeed, will not be heard until early next year and the council has consistently expressed its strong opposition to the project.

The inevitable confrontation between the miners and Aborigines has put new pressure on the Government to amend the act and water down its consent provisions.

Yesterday the Minister for Aboriginal Affairs, Senator Chaney, announced terms of reference for a review of the act.

Despite his assertion that they will not affect the basic principles of the act, the terms of reference open the way for removal of the veto power.

The review, to be conducted by a Perth QC, Mr. Barry Rowland, will include: "Consideration of what (if any) protection should be given to existing mining interests on land the subject of an Aboriginal land claim" and

"Consideration of the procedures for reaching agreement between Aboriginal land councils and miners in respect of prospecting and mining on Aboriginal land."

AUSTRALIA

WEST AUSTRALIA SEEKS CONTROL OF NUCLEAR-TEST ISLANDS

Canberra THE AUSTRALIAN in English 15 Nov 79 p 2

[Report from Robert Bennett]

[Text]

THE West Australian Government is pressing to have the Monte Bello Islands — site of British nuclear tests in the 1950s — returned to its control.

The islands are now considered to be virtually free of radioactivity, 23 years after the last test.

A report tabled in Federal Parliament this week has recommended that the islands should revert to West Australian control.

The islands are significant because of their proximity to Barrow Island. They are considered to have a very high petroleum potential.

Permanent habitation would be prohibited, but the islands could still be declared a national park.

The federal report follows a Commonwealth-State inquiry which found that considerations of safety do not preclude the return of the islands to West Australian administrative control.

The Premier, Sir Charles Court, who has been pressing for more than 18 months to have the islands returned to the State, is likely to make his request following the report, which indicates that the islands no longer present a health risk.

The islands, north-west of the iron ore port of Dampier and just north of the oil-producing Barrow Island, have been controlled by the Commonwealth Government under the Defence Act since tests were first held in 1952. The last test was in 1956.

Britain tested three atomic bombs in the Monte Bellos.

Findings of the joint investigation carried out by scientists from the Australian Radiation Laboratory and the State's Department of Public Health were included in a report by the Australian Ionising Radiation Advisory Council tabled in the Senate on Tuesday.

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The report revealed there was still a small area at the main beach contaminated by radiation. But the highest dose rate was lower than the minimum limit recommended for continuous exposure by members of the public.

(The dose rate is 9.15 millirem per hour. A level of 9.96 millirem per hour is the recommended limit.)

There are also signs of radioactivity on one of the islands. But it is an area of less than two hectares and a person would have to stay on it for at least three weeks to be over-exposed.

The report said it was difficult to imagine that a casual visitor could now come to any harm.

CSO: 5100

AUSTRALIA

OPPOSITION QUESTIONS GOVERNMENT POLICY ON NUCLEAR POWER

Melbourne THE AGE in English 15 Nov 79 p 22

[Text]

The SEC was campaigning for the right to generate nuclear power while the Government had a policy against it, the Opposition spokesman on minerals and energy, Mr. Amos, said last night.

He said the general manager of the SEC, Mr. Johnson, had clearly indicated that he thought the coal areas set aside by the Government's interim development order were not big enough.

The October edition of the 'SEC News' spoke of the need to consider nuclear power and the latest annual report showed allocations for nuclear power research, he said.

These factors clearly indicated that the Government supported the long-term de-

velopment of nuclear power. Yet it continually stated that it was against nuclear development at this stage, Mr. Amos said.

In answer to a question from Mr. Amos, the Minerals and Energy Minister, Mr. Balfour, repeated that the Government did not intend to introduce nuclear power to Victoria at this stage.

The interim development order placed on coalfields was to last for 30 years and he expected the area to suffice for this period. After that it would be extended.

"We have no intention of going nuclear at this stage," he said.

Mr. Amos called on the Government to bring the SEC into line with its policy and to state its intentions.

ARGENTINA

'LA NACION' SUPPORTS NATION'S STAND ON NPT OBJECTIONS

Buenos Aires LA NACION in Spanish 20 Dec 79 p 8

[Editorial: "Energy Independence"]

[Text] Throughout the ages the essential problem of states has been the unfettered availability of their energy sources. A better description of the problem would be whether a state is in a position to supply itself with energy. The contemporary age, during which states are pursuing development policies whereby they assert their personalities, is clearly an age of energy.

Energy policy is, therefore, a suitable vehicle for achieving a country's major objectives.

The way in which it is conducted will be a criterion in judging a government's performance, and this is the substantive issue among all the important matters about which we ought to be concerned as Argentines.

Even if consideration of this issue is not urgent in connection with our national output and proven and potential reserves of petroleum, specific observations must be made with respect to the degree of development we have achieved in nuclear power.

Our Atucha I Powerplant, which is among those that have received the highest international rating, is operating efficiently and profitably. We have exceptionally skilled human resources for this technology, and a solidly structured nuclear program has been approved. The Embalse de Rio III Powerplant is in the last stages before going on line.

The signing of the contract with the German firm Kraftwerk Union gives us reason to look to the country's future supplies of atomic energy with well-founded optimism. Argentina has complied strictly with the safety requirements and safeguards that guarantee both peaceful use, non-contamination of the environment and the physical protection of the populace. No one of good faith has grounds for raising objections in this connection.

Nor have we selfishly closed our doors and reserved exclusively for ourselves the benefits of all these scientific resources, of the practical experience we have gained. Programs with sister nations are fully under way or under study. Our national installations, which have been open to those who have come here to learn, have also been open to all of the technical inspections authorized in the commitments taken on by the republic, which, moreover, has fulfilled them to the letter.

Now then, achieving this situation has been no easy matter. Nor will it be easy to continue along the lines proposed in the policy that will govern our nation's activities in the nuclear field. The obstacles come from various sides and constitute an attempt to impair the independent decision-making that is legitimate in a sovereign state. A bid has been made to have us sign the Nuclear Non-Proliferation Treaty and a number of additional, unacceptable guarantees that have been described as safeguards. If the Nuclear Non-Proliferation Treaty were a diplomatic document in which obligations and restrictions were equitably apportioned and did not represent a monopoly privilege the key to which is held exclusively by the United States and the Soviet Union, and if it were not missing the signature of a number of major states that have raised objections similar to ours, there would perhaps be no valid reasons to oppose it.

Meanwhile, our representative at the International Atomic Energy Agency has informed its authorities in Vienna that Argentina does not consider it useful to participate in the aid program that the agency has been conducting. In reality, the demands made on us are irrelevant and so onerous that there is no justification for accepting them, not even in exchange for what the program offers.

Our national capabilities enable us to continue moving forward in a field in which we legitimately and without boasting occupy a dominant position. Argentina, which is in the midst of a full-fledged moral, political, scientific and technological reconstruction, cannot renounce its programs, objectives and intentions. Just as in the field of hydroelectric power in harmonious cooperation with its sister nations, it is persistently carrying out its intentions, which are harmful to no other country. It is simply not renouncing its destiny and not compromising by accepting limitations on its activities relating to the peaceful use of the power of the atom.

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CSO: 5100

ARGENTINA

MADERO COMMENTS ON DECISION TO TURN DOWN IAEA AID

Buenos Aires LA PRENSA in Spanish 26 Dec 79 p 7

[Text] The president of the National Atomic Energy Commission, Vice Adm Carlos Castro Madero, asserted that developing countries reacted positively to Argentina's decision to reject the technical assistance furnished by the International Atomic Energy Commission.

He added that these nations considered the move "a signal" to the international agency to make the appropriate adjustments and tailor its aid to "the real needs" of the developing world.

He pointed out that it also deserved the support of the nations that are fighting for "an increase" in the amount of technical aid allotted them, which "should not be conditioned on their being party to certain treaties or not."

Castro Madero, who made these remarks at Ezeiza Airport on returning home from the meeting of the International Atomic Energy Commission in New Delhi, India, affirmed, moreover, that Argentina's decision to turn down the aid "will not entail any drawbacks. On the contrary," he continued, "I think that it puts Argentina in its proper place," in keeping with its strides in nuclear power.

German Reactor

With regard to the provision by a German firm of a nuclear reactor for the heavy water plant that will be built here, he confirmed that various commercial aspects of the agreement have yet to be finalized, and "we must still reach agreement with the FRG on the conditions under which it is going to issue the export authorization," to which end "letters will have to be exchanged."

He also reiterated that the procedures are on an absolutely normal course and that he feels that there will be no "major obstacles."

He reaffirmed that Argentina would not sign the Nuclear Non-Proliferation Treaty because it regards it as "discriminatory" in that "it impairs the principle of the equality of all states before the law."

FINLAND

HAVING SOVIET-MADE PLANTS INHIBITS N-POLICY CRITICISM

Stockholm DAGENS NYHETER in Swedish 18 Nov' 79 pp 1, 6, 7

[Article: "Doubts in Finland Regarding Fifth Reactor"]

[Text] Finland will become No 1 in the world in the nuclear field next year if current plans are carried through. One reactor from the Soviet Union and another from ASEA [General Swedish Electric Company] are currently in operation, and two reactors from the same manufacturers will be operating next year. DAGENS NYHETER today examines questions concerning nuclear power in Finland.

The two Soviet Reactors stand a bit more than 10 km outside the city of Loviisa on the Gulf of Finland.

The other nuclear powerplant is situated in an area which is completely agricultural. People there say that nuclear power is good because it provides employment opportunities. Still there is criticism, and now it has reached the national parliament. The majority of the critics want to call a halt at four reactors. There need be no official decision concerning a fifth reactor until 1982.

Problem for Finland in Saying "No" to Soviet Union

Finland will pass Sweden and Belgium to become the leading nuclear country in Europe next year. At that time, nuclear power will provide about 30 percent of the country's electricity, if current plans are carried out. The debate about nuclear power has gone back and forth in Finland, but right now vigilance against the problems of nuclear power and criticism against it seem on the increase. A few people want to get rid of nuclear power altogether, but the majority of critics want to put the limit at the four nuclear reactors Finland will have in operation next year.

Henceforth, the question of nuclear power in Finland will be viewed deliberately from a Swedish perspective. The intent is to show what differentiates Finland from Sweden as far as this question is concerned.

The position is as follows:

Two companies are producing nuclear power. One is the state-owned Imatra Power Company (Imatran Voima Oy, usually referred to as IVO). It has a Soviet nuclear reactor facility in operation and a second nuclear reactor facility will start operating next year--if certain technical problems surrounding No 2 can be solved.

The other producer of nuclear power is Industry's Power Company (Teollisuuden Voima Oy, usually referred to as TVO). TVO has a reactor from ASEA running and will get a second one into commercial operation next year, half owned by state and municipal companies, among them Imatran Voima.

By Soviet Union

If Finland is to have a fifth nuclear reactor facility it will be delivered by the Soviet Union to Imatran Voima. Industry's power at present has no plans for expansion.

The government says that no decision concerning a fifth nuclear power facility need be taken until 1982. By that time the demands for electrical power during the 1990's will have been investigated. An investigation will also be made into whether Finland can get along with powerplants fueled by coal or peat instead of the fifth nuclear powerplant.

The critics, however, ask whether technical preparations and investigations don't take a direction which makes freedom of decision up to 1982 only apparent. The critics note the central role of Imatran Voima in energy questions and consider that usually things turn out the way this company wants them.

A fifth nuclear power facility to be delivered by the Soviet Union is included, loosely formulated, in agreements between Finland and the Soviet Union. In those circumstances, will it be politically possible to say no to a fifth nuclear power facility without this being portrayed as an anti-Soviet act, one that is at odds with Finland's best interests? This is the question posed by the critics.

Modified

There is still another complication. In Imatran Voima's two nuclear reactor facilities, the reactors, the turbines, and the generators have been delivered by the Soviet Union. But a large portion of the safety equipment comes from the West. Consequently the Soviet Nuclear reactor facilities have been modified by technicians in Finland.

There are Soviet nuclear power facilities all over the Eastern Block, but the only other place where they are found is Finland. Deliberations regarding export of the modified model to Third World countries are in progress. Libya and Iraq have been mentioned.

Nothing has been decided, and experts tell DN that Finnish technology may turn out to be too expensive to interest these countries.

However, should Soviet-Finnish nuclear power export to Third World countries become a reality, this would mean a political problem for Finland. Libyan leader Qadhafah openly supports terrorist movements and is one of the hawks of the Middle East. Iraq belongs to the hawks and is an unstable country. It may be in the interests of the Soviet Union power politics to sell nuclear power technology to those countries, but will Finland be served politically by becoming a co-exporter as an extension of Soviet power politics? The question is posed by critics of nuclear power in Helsinki.

The debate concerning nuclear power in Finland has now reached the national parliament and the latest debates in the middle of October and the beginning of November indicate that the parties have become more uncertain.

Minorities

It is also clear that so far, the critics are in a minority in parliament. From left to right, this is how it looks.

The Communist Party is divided into two factions, one "Stalinist" which is the minority and consequently is in opposition, and a majority which off and on forms part of the parliament. The "Stalinists" are pro-nuclear power. The majority favors an attitude of cautiously waiting for decisions on continued expansion.

Within the Social Democratic party there is a critical minority, primarily among young people. The present prime minister, Mauno Koivisto, is a Social Democrat, and he seems to have prospects of succeeding Kekkonen as president. The Social Democrats tread warily.

The Center Party has for many years been the party which has carried the state with the particular self-imposed task of nurturing connections with the Soviet Union. Today, however, the Center Party is No 3 in order of size. The situation within the party is unusually unclear because everyone is waiting for the leadership question to be decided at the party congress next year. Within the party there are isolated nuclear power critics.

The collective party, the Conservatives, became the second largest party after the social democrats in the latest election. The party listens closely to the wishes of industry; within its ranks, however, there are isolated nuclear power critics.

Nuclear Power Will Take Over

The diagram shows the distribution of different kinds of energy in production of electricity in Finland for the years 1978, 1979, and 1982. The columns indicate the share in terawatt hours (TWh), that is to say billions of kilowatt hours (kWh).

Water Power is for the most part completely utilized.

Electric Power produced by industry's counter pressure power constitutes a large part, viewed from an international standpoint. In this respect, Finland is a model as energy saver.

Heat powerplants, it is predicted, will play a growing role. These are plans for production of heat distributed over a distance with electrical power as a byproduct.

When nuclear power reactor facilities numbers 3 and 4 start operations nuclear power will become the, relatively speaking, largest energy source in the production of electricity.

It is predicated energy from coal will play a diminishing role. Nuclear power will take over.

The question of waste products has not been solved, and because of this, Industry's Power has got permission to run the first nuclear reactor facility until 1983. The power company can store used fuel in the facilities for 10 years.

The Soviet Union has let it be known that they cannot receive uranium for processing. There remain agreements with France or England. Inquiries concerning final storage continues.

Economic Boom in Nuclear Power Districts

Imatran Voima's nuclear powerplant is situated on Hästhömen a bit more than 10 km outside of Loviisa. The community took the initiative in getting the powerplant here, but today there are divided opinions regarding the blessings conferred by this particular neighbor, judging by the answers of some persons questioned by DN. The other nuclear powerplant is situated on the island of Olkiluoto (Swedish name Halmskäret) in an agricultural district. There people speak of new employment opportunities.

Loviisa is a coastal city about 100 km east of Helsinki on the Gulf of Finland. The municipality was economically disadvantaged, and in the beginning of 1966 the then town manager, I. G. Wahlström, read a newspaper notice about the state pondering the location of a nuclear powerplant. He contacted Imatran Voima, and the municipality councilors unanimously decided to sell Hästhömen to the power company, as well as parcels of land on the mainland. On Hästhömen there is room for a large nuclear reactor facility in the 1,000 megawatt class in addition to the two already standing there.

The work on the facilities started in 1970, and the next few years became a rather wild period in the history of the city. At the most, 3,900 people worked on Hästhömen, and so Loviisa had its Clondyke time.

Dividends

It also turned out to be expensive. New housing and streets with accompanying services cost money. Loviisa had to borrow to manage this, and at the largest the debt burden was 15-20 million marks says present city director Sigurd Slätis to DN. Now the debt is down to 10-12 million, but the nuclear powerplant is starting to pay direct and indirect economic dividends.

Three hundred and fifty employees at the powerplant pay taxes as does the plant itself, and together these make up about one-fifth of the income of the municipality. The nuclear powerplant has also attracted new industry. In 10 years the population has risen from 6,000 to 9,000. Half are Swedish speaking and half are Finnish speaking.

"Economically speaking, we can only be satisfied," says Slätis.

Too Technical

Annika Aho works in a bank office by the town square in Loviisa. "It's part of our everyday life," she says about the nuclear powerplant. "I think about it sometimes, and to an extent I follow what is being written about nuclear power. As long as it doesn't get too technical."

One man, who prefers to remain anonymous, says, "Of course you think about it sometimes. I don't like it, but now they're here. I don't follow the debate."

Harold Almroth is a retired electrician. He says. "We have no say in these things. They just keep building. The worst thing is the waste problem. Perhaps it'll be all right while I'm alive, but our children will likely have problems."

Harold Almroth is 74 years old, has played the bass tuba for 58 years and would rather speak about this than about nuclear power.

Welcome

The municipality of Eurajoki is on the southwest coast of Finland at the latitude of Gävle. The nuclear powerplant on the island of Olkiluoto was welcome because it provided employment opportunities. There has been no resistance, says municipal manager Risto Vahekoski to DN.

The community is purely agricultural with Finnish-speaking population. Since the building of the nuclear powerplant started, the population has risen to almost 6,000. Income, too. For a couple of years income rose by 32 percent, but this year it's 19 percent.

Toini Lauri lives on one of the farms situated closest to the nuclear powerplant. She lives barely 5 km from the plant and carries her stove wood into the house.

Two sons work at the nuclear powerplant, and that's important.

"It isn't unpleasant with nuclear power, but they don't have to collect everything in the same place," she says.

For Three

Aili Luonto lives on a farm situated 3 km, as the crow flies, from the nuclear powerplant.

"It's not so bad to have that plant as a neighbor," she says. "Nothing has happened."

But it has provided work for three in her family, her husband and two sons.

The oldest son, Timo, has steady work at the nuclear powerplant. Her husband and the youngest son work there as construction laborers. She takes care of the farming, and her husband helps four nights and on weekends. It's helped their economy, she says.

"I'm not worried either because they work over there at the plant," she says. "More reactors would be good because then there'll be more work."

Problems With Both

The Soviet nuclear powerplant in Loviisa and the one from ASEA in Olkiluoto are of quite different construction as can be seen from the drawing. Both have had problems.

The nuclear reactor facility in Loviisa has an output of 420 megawatts. It is somewhat smaller than Oskarshamn in Sweden. This is now considered an uneconomical size.

The first nuclear power facility in Loviisa has been in full production since May of 1977. The problems have been few. The problems started with the second nuclear power facility. At a test in June defects were discovered in the 9 mm thick shell of stainless steel on the inside of the reactor vessel. Small cracks and impurities in the material were discovered. The defects probably appeared during soldering work of the manufacturer in the Soviet Union.

Now efforts are being made to get rid of the defects in the material by polishing. Then it remains to be seen whether the customer, state-owned Imatran Voima, and the state radiation safety institute will accept the repairs.

The problems with Loviisa II are delaying the start by almost a year and a half. It's costing Imatran Voima 200,000 marks a day.

The first reactor in Olkiluoto was delayed by a year due to strikes and a fire at the work site. The nuclear reactor facility was started last year. The big problems with the operation have been leaks in the cooling water system of the generator, problems that have nothing to do with nuclear power.

In August and September, however, first 5 tons and then 15 tons of slightly radioactive water leaked out into the closed reactor building. The first nuclear reactor facility should, it is estimated, reach full production in January of 1980. The second one will be put into operation next year. Both have a capacity of 660 megawatts and have been delivered by ASEA. The size is a number right between Barseback and Ringhals 1.

Bolt Defect Discovered

Imatran Voima's nuclear powerplant in Loviisa--Loviisa I--was stopped Friday for bolt checking. The decision was made after a defect had been discovered in the expansion bolts. Expansion bolts are used to fasten pipes into concrete. Defects had earlier been discovered at Loviisa II in connection with normal checking before the impending start of the second unit.

"There's a considerable number of bolts that have to be checked," says information secretary Klaus Raninen at Imatran Voima. The cooling down of the reactor was started Friday afternoon, which means that control of the bolts could only be started Saturday morning.

There can be different kinds of defects in the bolts. Except for defects in the material it is possible that they have been mounted wrong, that they've been screwed too tight or that the parts inside the concrete were wrongly aligned.

The wedge bolts are used for anchoring pipes that don't have to withstand a great deal of stress. These bolts that are most important from the point of view of safety are anchored in the concrete by means of soldering to steel which already during the building phase has been sunk into the concrete.

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CSO: 5100

LOVIISA II NUCLEAR PLANT BEGINS HEAT TRIALS

Helsinki HELSINGIN SANOMAT in Finnish 15 Nov 79 p 31

[Article: "Heat Trials on Loviisa II to Be Conducted Next Week"]

[Text] The defects in the rust prevention layer of the Loviisa II Nuclear Power Plant have almost been completely repaired. It is intended to test the operation of the reactor next week by means of a heat trial. In the heat trial the power plant will be filled with steam from the first plant, which is already in operation, without activating the core of the reactor in the second power plant.

After the heat trial the Loviisa II power plant will be inspected again. If there is nothing that has to be repaired in the core of the plant or in other parts the plant can be put into operation by the beginning of next year.

According to the original schedule the Loviisa II power plant should have been completed in March of last year. Interest imposed as a penalty by the Soviet supplier has been accumulating since that time, but there has no longer been any need to pay it for more than 6 months.

Imatra Power has not had any inclination to discuss the amount of the penalty. According to unofficial estimates the interest was not sufficient to even cover the interest on the capital of the nuclear power plant.

The fines concern only those parts of the power plant delivered from the Soviet Union. Of the more than 1 billion markka price tag of the power plant Soviet deliveries make up one-third.

As a counterpoint to the difficulties of plant II Imatra Power has had reason to be happy with the operation of nuclear plant I. According to an announcement by Imatra Power the operational capacity of the power plant at Loviisa is commensurate with the 10 best new power plants in the whole world.

However, there have at times been differences in Imatra Power's own criteria and international criteria.

The Loviisa I power plant has also turned out to be better than original expectations with respect to capacity. The nominal capacity of the power plant is 440 megawatts, but in cold weather the theoretical capacity has increased to 460 megawatts. The colder the sea water, the more energy produced by the power plant.

However, the Loviisa I power plant is further burdened by a capacity limit placed on it by the Institute of Radiation Safety. Only 92 percent of the total capacity of the plant can be used while Teollisuuden Voima's [Industrial Power] plant in Olkiluoto can operate at full capacity. The Institute of Radiation Safety has limited the capacity of the Loviisa I power plant for two and a half years already since it has not been able to obtain sufficient information about the behavior of the fuel.

Imatra Power has sent several reports to the Institute of Radiation Safety for the purpose of eliminating the limit on its capacity. However, the Institute of Radiation Safety has not considered the information it has obtained to be sufficient.

Imatra Power is now compiling an appeal, which will include a condensation of all the information sent to date. According to the original schedule the appeal was to have been completed in October or November. Now it seems that its preparation will take until the end of November or the beginning of December.

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CSO: 5100

LOVIISA I NUCLEAR PLANT HALTS FOR REPAIRS

Helsinki HELSINGIN SANOMAT in Finnish 17 Nov 79 p 3

[Article: "Loviisa I Halted for Repairs"]

[Text] The operation of the Loviisa I Nuclear Power Plant will be halted because of defects discovered when hooking up the network of piping for Loviisa II. The decision to close down Loviisa I was made on Friday.

According to Imatra Power it is a question of a safety measure, by which the operation of unit I will be guaranteed to be safe. From the point of view of putting unit II into operation possible defects in the fastening of the pipe network are not significant, states Klaus A. Rainen of Imatra Power.

The fastening of the pipe network in the nuclear power plant is of central importance since defective connections can cause vibrations. Vibrations for their part can be fateful in the primary sphere or the radioactive sphere of the nuclear power plant since they can result in a rupture of the pipes and in major leakages.

The pipe network of Loviisa I will be examined 10 hours after the so-called start-up time. At that time it will be possible to examine pipe connections in the area of radioactivity. According to Imatra Power the power plant will be put into operation on Monday.

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CSO: 5100

MULTIPLE WARHEAD M-4 MISSILE SUCCESSFULLY TESTED

Paris LE MONDE in French 1 Dec 79 p 12

[Article: "France Announces Successful Test of Multiple Nuclear Missile"]

[Text] For the first time, on Thursday, 29 November, the Ministry of Defense announced that three experimental firings, conducted last July, of strategic missiles had made it possible to conclude the "proper functioning of missiles, both operative and in the state of development in the nuclear arsenal."

1. "The launching from a submarine of a M-20 missile, identical to those which will henceforth be carried by all nuclear submarines of the strategic oceanic force has been successful," the Ministry of Defense stated. "This exceeds the number of 10 consecutive successful launchings of M-20 missiles, most of them from submerged submarines."

With the launching of a fifth strategic submarine, the Tonnant, scheduled for June 1980, next year the French oceanic force will be equipped with the same model of nuclear missiles, the M-20, capable of launching a megatonic thermonuclear warhead with a 3,000 kilometer range.

2. The July launching of the S-3 was a success which crowns the development of the S-3 missiles which will be deployed shortly in the installations of the Albion Plateau of the strategic air force," specified the Ministry of Defense. "The good results of this experiment have backed those of the previous experimental launchings. They have led to the conclusion that the S-3, its components, and launching procedures had become operationally qualified."

The S-3 missile, which will be gradually deployed between now and 1982 in the silos of Haute-Provence, is the equivalent of the M-20, i.e., it carries a megatonic thermonuclear charge.

3. "A M-20 missile equipped with a M-4-type warhead was launched to study the reentry into the atmosphere of the multiple warheads of the M-4 missile. This launch, preceded by two other experimental launches carried out in December and last April, to study the spacing and reentry of M-4 warheads, yielded good results," was the estimate of the Ministry of Defense, which concluded as follows: "This try marks an important stage in perfecting the M-4 multiple warheads and their guidance system."

The M-4 is a three-stage missile (the previous French missiles had two stages). As of 1985 it will be placed in nuclear submarines so that it may gradually replace the M-20 missile. In principle, it is the submarine Inflexible, currently under construction, that will be the first to be equipped with such missiles. Four other submarines (Indomptable, Terrible, Foudroyant, and the operational Tonnant) will be equipped with such missiles subsequently. Of the six strategic submarines the Redoutable alone will carry the M-20 missiles.

With its 4,000 kilometer range, the M-4 will be armed with thermonuclear multiple warheads--it is a question of seven per missile--which will hit the target as a cluster. According to the technique known by the initials MRV (Multiple Reentry Vehicle), these weapons will follow shifting ballistic trajectories. A prototype of the M-4 is scheduled for testing at the end of 1980 from the testing center in Landes.

5157

CSO: 5100

FRANCE

NATIONAL NUCLEAR WASTE PROCESSING AUTHORITY FORMED

Foundation, Mission

Paris SEMAINE DE L'ENERGIE in French 15 Nov 79 p 3

[Text] A joint decision by the industry, economy and budget ministers, dated 7 November 1979, has just created within AEC [Atomic Energy Commission] the National Nuclear Waste Processing Agency (ANDRA).

The development of the French electronuclear program has been accompanied by an inclusive and coherent waste processing policy. The creation of ANDRA, which replaces the Waste Processing Office already established at AEC, comes at the time when waste production is going to reach the industrial level.

ANDRA is responsible, within the framework of regulatory and legislative directives and conforming to the governmentally defined general policy, for long term waste processing operations. In particular: for insuring the management of long term storage centers, whether directly or by the intermediary of a third party acting on its account; for the conception, introduction, development, and establishment of the new long term storage centers, and for the conduct of all research necessary to this end, particularly where waste production forecasting is concerned; for promotion, jointly with the waste producers, of specifications for radioactive waste treatment and storage before its removal to the long term storage centers; and for contributing to the research, studies, and works about, as well as development of, procedures for long term radioactive waste processing.

The will of the public powers is carried out by these established organizations. One aspect is to see that the most recent scientific and technical developments are applied to nuclear waste processing. That is the purpose of ANDRA's Scientific and Technical Counsel.

ANDRA is provided with its own balanced budget to cover all its expenditures and receipts. These last consist mainly of remuneration for services rendered, contributions by waste producers, and could be supplemented, insofar as it is needed, by budgetary subsidies. ANDRA's projected annual budget is submitted to AEC.

History, Organization, Responsibilities

Paris AFP SCIENCES in French 15 Nov 79 pp 24, 25

[Text] Paris--Creation of ANDRA--The creation of ANDRA within AEC comes at a time when, with electronuclear energy development, production of these waste is going to reach the industrial level.

For example, a single 900 megawatt nuclear core like that in the Fessenheim powerplant annually produces several hundred cubic meters of waste with low to moderate radioactivity, including about 3 cubic meters of high activity waste, which are melted into a permanent resin.

High activity wastes are those whose radiations are between 10 and 100 curies per litre. Other wastes hold only a hundredth or a thousandth curie per litre. It is estimated that between now and the year 2000, France's "production" of high activity wastes will reach 2,000 cubic meters, and 700,000 cubic meters of low and moderate activity wastes.

ANDRA, which replaces CAE's Waste Processing Office, in existence since May 1978, will be principally responsible, just as the decision published in the official journal specifies, for long term radioactive waste processing operations, including necessary preparations for storage of 1,000 years and more.

ANDRA will conceive, introduce, develop, and establish storage centers; promote, together with waste producers, specifications for treatment; and finally, contribute to research, studies, and works about, as well as development of, longterm radioactive waste procedures.

ANDRA will have available a 1980 budget of Fr 100 million, which will be provided by both remuneration for rendered services, and contributions from waste producers and possible government subsidies. It will be under the authority, on one hand, of a management counsel presided over by CEA's general administrator; and on the other hand, by a scientific and technical counsel presided over by the high commissioner for atomic energy.

ANDRA's creation is the result of a several year study conducted by the various ministerial departments concerned.

The establishment in May 1978 of a Waste Processing Office at CEA already had the purpose of creating the most favorable conditions for facilitating ANDRA's realization. It unites the necessary technical abilities within CAE, and contributes, in liaison with the public powers, to the definition of the missions, structure, and methods of the future agency.

ANDRA's creation and the missions which are entrusted to it correspond to the will of the public powers to confer upon a competent and responsible public organization the mission of long term waste processing, under the

best security conditions. ANDRA could sub-contract some of the work in carrying it out, while still keeping the responsibility.

CEA emphasizes that ANDRA is responsible for a processing mission only. The missions of protection, security, and surveillance remain entrusted to the appropriate administrations. Security matters, in particular, are entrusted to SCSIN [Central Service for Nuclear Installations Security] in the Ministry of Industry, and to SCPRI [Central Service for Protection Against Ionic Radiations] in the Ministry of Health.

In particular, the new ANDRA will be subject, in its operations, to all the authorization and control procedures required of INB [Basic Nuclear Installations].

9374

CSO: 5100

THREE ALTERNATIVES TO BE PRESENTED IN NUCLEAR REFERENDUM VOTING

Stockholm SVENSKA DAGBLADET in Swedish 18 Dec 79 p 4

[Text] There are now six nuclear reactors in use in Sweden. Four more are ready for use and two are under construction. The Parliament has decided that there shall be a referendum on 23 March 1980 about the future role of nuclear power in the production of energy. The referendum will contain three propositions.

The below text will be printed on each ballot.

Proposition Number 1

Nuclear power shall be phased out at a pace which is consistent with the need for electric power for the maintenance of employment and welfare. In order to reduce petroleum dependence and pending the availability of renewable energy sources we will continue to use at most the 12 nuclear reactors which are now in use, built, or under construction. No further nuclear powerplants will be built. Safety considerations will determine the order in which reactors will be shut down.

Conservative Party

Proposition Number 2

Nuclear power shall be phased out at a pace which is consistent with the need for electric power for the maintenance of employment and welfare. In order to reduce petroleum dependence and pending the availability of renewable energy sources we will continue to use at most the 12 nuclear reactors which are now in use, built, or under construction. No further nuclear powerplants will be built. Safety considerations will determine the order in which reactors will be shut down.

Means by which this goal will be reached:

Energy conservation will be vigorously pursued and further stimulated. The weakest groups in society will be protected. Measures will be taken to control the consumption of electricity so as to inhibit electric heating in newly constructed buildings.

Research and development of renewable energy resources will be expedited under the leadership of the government.

Measures will be taken for the improvement of environmental and safety factors of nuclear power. A special safety study will be carried out for each reactor. For citizen participation there will be a safety committee at each reactor site with local membership.

Production of electricity by oil- or coal-fired steam powerplants is to be avoided.

The government will have the main responsibility for production and distribution of electric power. Nuclear powerplants and other future installations for production of significant electric power will be owned by the state and the municipalities. Excess profits from hydro-electric production will be taken over by taxation.

Social Democratic Party
Liberal Party

Proposition Number 3

Plans will be developed for phasing out of all nuclear power within at most 10 years, a conservation program for reduced dependence on petroleum based on continuing and intensified energy saving, and greatly increased input to renewable energy resources.

There will be an immediate stop of all construction of nuclear powerplants.

Uranium mining will not be permitted in our country.

Reactors which are already in use may continue operation under strict safety regulations.

No additional reactors will ever be used.

Immediate shutdown will take place if current or future safety studies so demand.

Work against the spread of nuclear power and nuclear weapons will be expanded.

No further development will be permitted and the export of reactors and reactor technology will be halted.

Work will be increased on alternative energy production, increased use of domestic raw materials and more effective conservation in the production of energy.

Center Party
Leftwing Communist Party

SWEDEN

REFERENDUM CAMPAIGN BOUND TO STRAIN GOVERNMENT COALITION

Stockholm DAGENS NYHETER in Swedish 18 Dec 79 p 25

[Commentary by Sven Svensson: "Miserable Political Circus Over the Referendum"]

[Text] It is becoming all the more difficult to see how Falldin's three-party government will be able to hold together after the nuclear power referendum. It does not inspire confidence that the three government parties decided on three different propositions. That the social democrats and the liberals in fact represent a parliamentary majority further complicates the situation.

The referendum cannot be based on a simple "yes" or "no" to nuclear power, because of the negotiations between party leaders on the matter. There is nothing further of a positive nature to say about this miserable circus of deviousness and politics. Most have managed to arrange things so cleverly that the people will not be able to decide on concrete alternatives.

The alternative with six nuclear powerplants in use for at most ten years is a clever compromise from the beginning. The alternative reminds one of something desired but not dared.

If nuclear power is dangerous it should naturally be eliminated as quickly as possible.

What is worse is that this line lacks political credibility. Even if it should gain a majority in the referendum, one must assume that it advances a very ambiguous recommendation as to how the phasing-out should be done, considering the environmental movement, the Leftwing Communist Party will promote a socialist development line, while the Center Party must stand by a mixed economy with as little central direction as possible.

There is also another question of credibility.

The political parties, including the Center Party, have for a number of years assigned money to the development of nuclear power. Their unity has resulted in the building of 10-11 nuclear powerplants.

Falldin can never honestly deny his responsibility for contributing to this development. The six-plant alternative should also therefore clarify how the elimination of the four nuclear reactors which are completed but not yet operating should be carried out.

Guidelines for Phase-out Lacking

It is crucial that neither the Center Party nor the Leftwing Communist Party offered any guidelines for how the phase-out of the six plants which are already in use should be carried out.

Different calculations can give different results. One thing is, however, quite clear. The billions which have been spent with broad unity to build nuclear powerplants cannot be used again. One result of the ten nuclear powerplants which are in use or ready to go is that the nation is poorer. Some believe that we can afford it, others do not.

The 12-plant alternative also contains unprecedented examples of dishonesty and tactics. For many years the social democrats and the conservatives have been in remarkable agreement on developing nuclear power.

Now the conservatives are suddenly alone, while the social democrats and the liberals are arm-in-arm.

What can one say about that?

It would have been much more honorable if the conservatives had dared stand by their true position, that nuclear power should be expanded. Then the people would have had a real alternative to vote for. But the conservatives would not dare to advance such a position, because it would produce fewer votes than the election result.

Socialism for the Sake of Taste

Social democrats are suddenly working with socialism to make the meal a little tastier, and they have the support of the liberals in this. Nationalization applies to Oskarshamn's power group, OKG, or more accurately the twelfth reactor, Oskarshamn 3.

The amusing part about this is that just when the liberals wanted to discontinue this privately owned reactor then the social democrats and the conservatives demanded that it be continued at any price. The truth is that the government must go in with money if the reactor is to be completed.

Palme's reliability on the question of socialism is not overwhelming, as with nuclear power in general. His idea was to win the election by eliminating the matter of nuclear power through a referendum. But a miss is as good as a mile.

Perhaps it is typical that this is an activity which will end just as the social democrats desire to nationalize. Private interests are not opposed to that.

But what will happen to the Falldin government if "no" wins or if "yes" wins?

Let us say that it would perhaps be all right if "no" wins, but it would be better not to have that happen. If they do not agree on the questions, they probably would agree to the far-reaching disruption of economic planning that will result from rapid termination.

Worse for Falldin if "Yes" Wins

It will be worse for the Falldin government if "yes" wins. Then Palme must act to get rid of Falldin and create conditions for a new parliamentary election.

Palme's thoughts below were expressed during the general political debate in Parliament immediately after the election:

"The Center Party is the main loser of the election. Center lost one-fourth of its voters. A defeat of that size is almost unique in Swedish politics. It is presumably unthinkable in any other country or any other party to first lose every fourth voter and then claim to build a new government and demand the post of prime minister. Simple self-examination should indicate that such a government must have very little authority."

Palme's Authority Could be in Danger

If Palme accepts that Falldin first loses the election and still becomes prime minister, and later loses the referendum and still plans to continue as prime minister, then Palme's authority is finished after the circus which we just endured.

If "yes" wins the referendum, Palme is simply forced to go on the attack against Falldin and aim for a vote of no confidence against his government.

Of course such a no confidence vote would not take place. As soon as the results of the referendum were known and the Falldin government was threatened by a possible no confidence vote they would be forced to decide whether to continue or resign.

Remember that Ullsten offered to continue as prime minister up to the time of the referendum and to resign if "no" won.

Falldin has stated that he is ready to administer the 12-reactor alternative.

This is going to make the political situation very difficult. It is not just Palme whose political credibility is at stake. Ullsten is also going to suffer in this matter if he agrees that Falldin continue as prime minister after a "yes" victory.

9287

CSO: 5100

REFERENDUM CAMPAIGN SUPPORT FUNDS DIVIDED AMONG PARTIES

Stockholm DAGENS NYHETER in Swedish 18 Dec 79 p 25

[Text] A total of 36 million kronor has been set aside in government contributions to the campaigns for the three alternatives in the nuclear power referendum to be held 23 March next year. The money is to be divided among the parties. The "People's Campaign Against Nuclear Power" will bring 18 million to the Center Party and the Leftwing Communist Party. The Social Democratic Party and the Liberal Party will get 10 million and the Conservative Party's "Energy for Sweden" campaign will get 8 million.

The party leaders agreed on the dividing of the money at noon on Monday. The night before they drew lots for which names the different alternatives should have.

The results of the drawing were that the conservative line--which in its introduction is identical with that of the social democrats and the liberals--was designated "Proposition Number 1." The social democrat and liberal line was designated "Proposition Number 2" and the center and leftwing communist line "Proposition Number 3."

There was agreement that the government campaign contributions should be divided among the parties. But there was controversy about how the kitty should be divided between both the parties favoring the 12-reactor alternative. The social democrat/liberal group now gets two million kronor more than the conservatives in view of the two parties' larger organizational costs in connection with the referendum campaign.

The parties agreed that none other than the official committees will get government contributions. The "People's Campaign Against Nuclear Power" favoring six reactors has been established for a long time, and the conservatives have had their "Energy for Sweden" campaign underway for some weeks under the leadership of Member of Parliament Per Unkel.

And then there is the social democrat/liberal group. For their proposition a large committee of at least 50 people is expected to go on the offensive. Social democrats, liberals, and members of the Swedish Federation of Trade Unions and the Central Organization of Salaried Employees are expected to make up the main body.

Twenty-five Percent in Advance

The proposition for a special law on the referendum will be placed before the Parliament on Wednesday. Thereafter a 25 percent advance of the government contributions can be paid to the campaign committees which have already been formed.

At a press conference on Monday Minister of Energy Carl Axel Petri said, "There will be no problem of interpretation of the number of reactors in the referendum, as the wording of the propositions is clear."

However, he said that it can be more difficult to interpret that which appears farther down on the ballots, for example concerning state and municipal ownership of future larger powerplants, according to the social democrat/liberal line.

"But if more than 50 percent favor Proposition Number 2, obviously that will have to be taken into consideration," said Petri.

In the negotiations over the campaign money the six-reactor line and both the 12-reactor lines have been considered of comparable magnitude. However, in the information brochure which the National Tax Board will send out to all households some time in February, the three propositions will get equal space, about two pages each.

The People's Campaign has protested against this, but Petri said that all propositions must have the opportunity to be heard.

Ballots Home

At the time of the referendum in March the three ballots, bearing the title "Referendum on the Nuclear Power Question," will be sent out to all registered voters together with the electoral card. Blank ballots will be available at the voting places.

Liberal Party Leader Ola Ullsten was busy on Monday with many questions about how he could go together with the social democrats on the matter of nationalization of powerplants.

"The wording of ownership has a limited meaning which cannot reasonably be called nationalization. It is natural that the government and the municipalities have a decisive interest in power plants, which applies to this discussion. It is essentially already so," he said.

Ullsten continued, "As for large future powerplants, it will also actually be the government and the municipalities which will support construction. Just because Vattenfall and Sydkraft are building new large powerplants, this is not more remarkable than that the railroads and the postal system are owned by the government, as pointed out by Gosta Bohman. Changes in ownership of existing powerplants, except for nuclear powerplants, is not a part of the referendum."

SWEDEN

ENVIRONMENTALISTS DISSATISFIED WITH ALTERNATIVES POSED

Stockholm DAGENS NYHETER in Swedish 18 Dec 79 p 25

[Text] "Disheartening. That is what we in the Environmental Society and the People's Campaign feel about the politicians' decision for tactical reasons to go forward with two 'yes' alternatives in the referendum. It is a slap in the face to the opinion of half a million people who even before Harrisburg demanded an honorable referendum of 'yes' or 'no' to nuclear power in Sweden."

The "no" side in the nuclear power question is strongly critical of the results of the party leaders' debate which resulted in three choices in the voting on 23 March.

"The two 'yes' alternatives are of course identical in their application to nuclear power. The point of difference between the 'yes' parties, the question of future nationalization of electricity production, belongs in Parliament and not in the referendum," said Peter Larsson of the Environmental Society and the People's Campaign Against Nuclear Power.

"It seems as though the 'yes' advocates are trying to hide what the people really want from the referendum. The decision for two 'yes' alternatives means that they are not interested in a clear and honorable referendum: 'yes' or 'no' to nuclear power," said Larsson.

The "no" organization believes that the decision of the conservatives, social democrats, and liberals to bring forth two "yes" alternatives contributes to an undermining of confidence in politicians and decision makers.

"One cannot sit in Parliament and one day complain about the politicians' disdain for the people, and the next day play tactics with people's party loyalty over the question of nuclear power," said Peter Larsson.

"It is a slap in the face of the people's strong opinion which before Harrisburg demanded a referendum in which a clear 'yes' is opposed to a clear 'no' and nothing else. This opinion began on 3 March of this year with a petition containing 520,000 names.

"Those of us on the 'no' side have never played games with our clear line, and we have an organization which crosses political lines and a leadership which is just as broadly representative as the Parliament. There is no room for different interpretations of the referendum, according to the Environmental Society. Each alternative can have its own interpretation of the referendum, according to the Environmental Society. Each alternative can have its own interpretation. The alternative which gets the most votes wins," said Peter Larsson.

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SWITZERLAND

EXPLOSION AT SARELLI POWER PLANT CAUSES HEAVY DAMAGE

Zurich NEUE ZUERCHER ZEITUNG in German 28 Dec 79 p 21

[Article: "Power Generating Plant Near Bad Ragaz Bombed"]

[Text] Bad Ragaz, 25/26 December (sda). A bombing attack on the Sarelli Central Station of the Sarganserland Power Plant near Bad Ragaz in the early morning hours of Christmas day has caused an estimated 1 million francs in property damage. There are no indications yet of who set the bomb. The attorney general's office is working together with the canton police in St Gallen to investigate the case. The power plant belonged to the Nordostschweizerische Kraftwerke (NOK).

Transformer and Beam Damaged

According to information provided by the investigators, unknown perpetrators entered the grounds of the Sarelli plant in the early morning hours of 25 December by climbing over a 2-meter fence. After placing the explosive device, which took at least a half hour, it was detonated at 0436 and could be heard from far away. The explosives destroyed parts of the large transformer station, located in the east side of the main building, as well as the 32-meter high transformer beam. The beam itself did not crumble but its foundation was damaged so extensively that the beam had to be dismantled for safety reasons.

Because the transformer stations at the Sarelli plant were destroyed, there was no electrical power in the village of Vaettis and in a small village near Pfaefers; by using emergency power this was rectified within a few hours. The explosion caused a fire to break out near the transformer unit, making it necessary for fire engine units from Bad Ragaz to come to the scene.

The police have offered a reward of 10,000 francs for any information which would lead to the capture of the perpetrators. The police are searching primarily for a vehicle which was seen on the local highway going in the direction of Landquart shortly after the detonation on the power plant grounds. The authorities investigating the case would also like to know whether an explosives depot has recently noticed a large quantity of explosives missing.

Fourth Attack in Two Months

In November two power plants were damaged in quick succession. On 3 November, a 110-meter high steel beam of the nuclear power plant in Goesgen was bombed. A million francs worth of property was destroyed. One week later a 60-meter high meteorbeam on the grounds of the planned nuclear power plant in Graben was toppled when the metal cables holding it up were cut. The resulting property damage was estimated at 50,000 francs.

Only 4 weeks ago an explosive device heavily damaged a high-voltage beam of the NOK near Flaesch. In this case as well, those responsible for the detonation were not apprehended.

Condemnation From the Opponents of Ilanz I and II

The Pro Rein Anterior (PRA), an association which has expressed public opposition to the construction of the Ilanz I and II power plants on the Rhine River by the NOK, has distanced itself from bombing attacks in all forms. It has also remonstrated against any suspicions that it may be behind the attacks.

Among other things they said: "The Pro Rein Anterior condemns this attack on the Bad Ragaz station, just as it condemns the creation of illegal conditions which the NOK accepts in the construction of the Ilanz power plants. No problems in our times are solved by violence; it only creates new ones. The Pro Rein Anterior respects only democratic and judicial decisions."

Comments by the NOK Directorate

In an interview with the DDP, NOK President Franz Josef Harder said that he is beginning to question whether, after all the criminal activities occurring in connection with the discussion on energy, the country is still capable of guaranteeing law and order. A very serious question arises as to whether the power plants have to organize their own protection services for their stations. But "if everyone has to have private armies [in Switzerland] to protect life and property then this would be devastating," Harder said. Every since electrical power has been provided, transformer stations were built out in the open.

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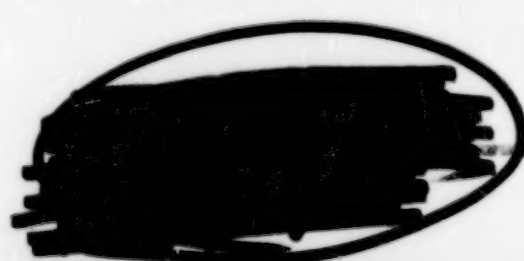
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